

WHAT IS CLAIMED IS:

1. A webcasting system for multicasting various multimedia contents through plurality of channels in real time by employing a ground-way technology comprises:

5 a plurality of broadcasting stations for providing multimedia services;

a combiner connected to the broadcasting stations for combining the multimedia services;

a web server 300 connected to the combiner and a public network for communicating with the combiner and receiving subscription for the multimedia services;

at least one local multicasting station connected to the combiner for receiving combined data stream from the combiner;

a plurality of user terminals connected to the web server via public network.

2. The webcasting system of claim 1 further comprises a modem installed in or connected to each user terminal for communicating with the local multicasting station.

3. The webcasting system of claim 1 further comprises a two-way antenna connected to the modem for receiving and transmitting signals.

20 4. The webcasting system of claim 2 wherein the modem is connected to the web server through a backup line for maintaining communication between the web server and the user terminal even when a wireless channel between the local multicasting station and the user terminal is broken.

5. The webcasting system of claim 1 wherein the combiner is a an

intelligent hub.

6. The webcasting system of claim 5 wherein the combiner is an intelligent LAN switch.

7. The webcasting system of claim 5 wherein the combiner is a router.)

5 8. The webcasting system of claim 1 wherein the local multicasting station modulates the data from the combiner by 64 QAM and take the data on a predetermined frequency.

9. The webcasting system of claim 8 wherein the frequency has a range of 2.535 to 2.655Ghz.

10. The webcasting system of claim 9 wherein the frequency range is provided with a plurality of frequency channels.

11. The webcasting system of claim 10 wherein each frequency channel has 6Mhz bandwidth.

12. The webcasting system of claim 11 wherein the 6Mhz channel has 27Mbps bandwidth by 64QAM.

13. The webcasting system of claim 12 wherein each frequency channel is provided with 27 1Mbps sub-channels.

20 14. The webcasting system of claim 10 wherein at least one frequency channel is assigned for multimedia webcasting and at least one frequency channel for data communication.

15. The webcasting system of claim 2 wherein the modem comprises:
an antenna for receiving data signals from the local multicasting station
and transmitting signal from the user terminal;
a splitter connected to the antenna for splitting the received data

signals;

a filter connected to the splitter for filtering a controlling signal and data signal;

a demodulator connected to the filter for demodulating the controlling signal and data signal;

5 a decoder connected to the QAM demodulator for decoding the controlling and data signal;

a controller connected to the decoder for detecting user IP and channel establishment of release signal so as to establish or release webcasting;

an encoder connected to the controller 720 for encoding digital signal from the user terminal; and

a QAM modulator connected to the encoder for modulating encoded digital signal form the encoder and sending modulated signal to the filter.

16. The webcasting system of claim 15 wherein the modem is provided with a port for connecting to the web server via public network such that the channel connection is maintained even when a wireless connection is broken.

17. A webcasting method for multicasting various multimedia contents comprises the steps of:

(a) subscribing for multimedia services on a web site in a web server connected to a public network;

20 (b) registering a subscriber as a member by storing a subscriber IP and other subscriber's information;

(c) requesting channel establishment to the web server by the subscriber sending a channel establishment request signal;

(d) verifying the subscriber by looking up a table listing the subscriber IPs; and

(e) establishing a channel if the subscriber IP is valid.

18. A webcasting method of claim 17 further comprises a steps of:

5 (f) producing various multimedia data by a plurality of broadcasting stations; and

(g) combining the multimedia data from the broadcasting stations by a combiner.

19. A webcasting method of claim 17 further comprises the steps of:

(h) sending the subscriber IP and a channel establishment permission signal from the web server to the combiner;

(i) inserting the subscriber ID into a data field of the packet on the basis of the channel establishment permission signal.

20. A webcasting method of claim 17 further comprises the steps of;

(j) carrying the multimedia data on a predetermined frequency band.

21. A webcasting method of claim 20 where in the frequency band is 2.532Ghz to 2.655Ghz.

22. A webcasting method of claim 21 wherein the frequency band has a plurality of frequency channels.

20 23. A webcasting method of claim 22 wherein each frequency channel has a plurality of sub-channels.

24. A webcasting method of claim 22 wherein among the plurality of frequency channels, at least one channel is assigned for downward webcasting and at least one channel is assigned for other data communication such as

video conference, internet access.

25. A webcasting method of claim 23 wherein each sub-channel has a bandwidth of 1Mbps.

26. A webcasting method of claim 20 further comprises the step of propagating the multimedia data signal carried on the predetermined frequency band through air.
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27. A webcasting method of claim 26 further comprises the steps of:
receiving the multimedia data signals from the local multicasting station;
splitting the multimedia data signals according to the frequency channels;

filtering a controlling and data signal from the multimedia data signal;
demodulating the controlling and data signals;
decoding the demodulated controlling and data signals;
detecting the subscriber IP and channel establishment or release signal; and
establishing or releasing channels according to the channel establishment or release signal.

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